IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: Steven Michael BELLOVIN

SERIAL NO: 09/900,773

FILING DATE: July 6, 2001

TITLE: ENHANCED COMMUNICATION SERVICE FOR PREDICTING AND HANDLING COMMUNICATION INTERRUPTION

ART UNIT: 2684

EXAMINER: Angelica PEREZ

Mail Stop AF
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

SIR:

The above-identified application having been finally rejected in the Office Action mailed June 30, 2005, the Applicant respectfully submits this Pre-Appeal Brief Request for Review. A Notice of Appeal is concurrently submitted herewith.

Remarks/Arguments

Claims 1-28 are pending in the application, and stand rejected.

The rejection of claims 1-3, 17, 21 and 25-28 under 35 USC 103(a) as being unpatentable over Tayloe et al. (US 6,192,240) ("Tayloe") in view of Smolik (US 6,119,005) should be withdrawn.

The combination of Tayloe and Smolik does not suggest consulting, or predicting based upon, data comprising a plurality of predetermined prediction points indicating a

fixed structure capable of presenting an interference to a communication in progress as recited in each of independent claims 1, 21, 25, 26 and 28.

Brief explanation of the independent claims

The present invention as recited in the independent claims relates to predicting a communication drop-off in cellular systems. The prediction may be based on predetermined "prediction points" corresponding to fixed structures such as buildings, tunnels, hills, valleys or the like, that are known to cause no-coverage areas where communication fails. See, e.g., the present specification at page 8, lines 17-20, and FIG. 1B showing prediction points 43A and 43B. A prediction point may be detected during a cellular communication session, for example while driving down a road. Proximity to a prediction point allows an imminent call drop to be reliably predicted, so that users can be warned ahead of time of the coming call drop. See the present specification at the paragraph bridging pages 7 and 8, and FIG. 1B.

Tayloe and Smolik

The Examiner acknowledges that Tayloe is silent concerning the claimed prediction points. See the final Office Action mailed June 30, 2005 (hereafter, "Office Action"), page 3, lines 3-5. However, the Examiner alleges that Smolik discloses prediction points according to the claimed invention (Office Action, page 3, lines 6-11). This is error. Smolik relates to determining base stations that are suitable recipients of a call hand-off necessitated by signal quality degradation. Candidate base stations make up a "neighbor list." See, e.g., Smolik at col. 1, lines 16-23. There are no prediction points as in the claimed invention in Smolik's neighbor list.

More specifically, Smolik relates to generating "pilot channel metrics" based on a number of times that a mobile unit identifies a given channel as having a signal strength exceeding a predetermined threshold. The pilot channel metrics are used to create a ranked neighbor list. See, e.g., col. 2, lines 12-17; col. 5, lines 42-45 and col. 8, lines 44-47. Far from providing prediction points corresponding to fixed structures as

in the present invention as claimed, Smolik's arrangement is a "continuous data collection process" (col. 2, line 33) designed to reflect changes in the radio environment.

The Examiner cites in particular to Smolik at col, 1, lines 32-67 to col. 2, lines 1-28 as disclosing the claimed prediction points (Office Action, page 3, lines 9-10). The Examiner contends that the cited portions disclose "an automated handoff list with information regarding intervening structures ...". This, again, is error: Smolik's neighbor list contains base stations ranked according to pilot channel metrics, not "information regarding intervening structures" as alleged. The cited portions of Smolik, in fact, emphasize the changing nature of the neighbor list. See, e.g., col. 1, line 67 to col. 2, lines 1-2: "Thus, the neighbor list update process is dynamic and driven by the changing circumstances in the cellular environment ...". It is apparent, therefore, that Smolik discloses, not prediction points indicating fixed structures, but a changing list of base stations ranked according to pilot channel metrics.

In view of the above, independent claims 1, 21, 25, 26 and 28.are allowable over Tayloe and Smolik. Claims 2, 3, 17 and 27 are therefore likewise allowable over Tayloe and Smolik for at least the reason that they depend on one of the independent claims. Withdrawal of the rejection of claims 1-3, 17, 21 and 25-28 as being unpatentable over Tayloe and Smolik is therefore respectfully requested.

The rejection of claims 10-16, 18-20 and 22-24 under 35 USC 103(a) as being unpatentable over Tayloe in view of Smolik and further in view of Amin et al. (US 5,995,830) ("Amin") should be withdrawn.

Claims 10-16, 18-20 and 22-24 were rejected under 35 USC 103(a) as being unpatentable over Tayloe in view of Smolik, and further in view of Amin. These claims depend on one of independent claims 1 and 21, and therefore by dependency include the feature "data comprising a plurality of predetermined prediction points indicating a fixed structure ...," etc., discussed above. Amin does not disclose or suggest this feature, and therefore claims 10-16, 18-20 and 22-24 are allowable over Tayloe, Smolik and Amin for at least the reasons discussed in connection with claims 1 and 21.

Withdrawal of the rejection of claims 10-16, 18-20 and 22-24 as being unpatentable over Tayloe, Smolik and Amin is therefore respectfully requested.

The rejection of claims 4 and 5 under 35 USC 103(a) as being unpatentable over Tayloe in view of Smolik and further in view of Bartle et al. (US 6,018,655) ("Bartle") should be withdrawn.

Claims 4 and 5 were rejected under 35 USC 103(a) as being unpatentable over Tayloe in view of Smolik and further in view of Bartle. Along lines discussed above, since they depend on claim 1, claims 4 and 5 are allowable over Tayloe and Smolik for at least the reasons discussed in connection with claim 1. Bartle does not remedy the deficiencies in Tayloe and Smolik, and consequently claims 4 and 5 are allowable over the combination of Tayloe, Smolik and Bartle. Withdrawal of the rejection of claims 4 and 5 as being unpatentable over Tayloe, Smolik and Bartle is therefore respectfully requested.

The rejection of claims 6-9 under 35 USC 103(a) as being unpatentable over Tayloe in view of Smolik and further in view of Bartle, and further in view of Elwin (US 6,317,596) ("Elwin") should be withdrawn.

Claims 6-9 were rejected under 35 USC 103(a) as being unpatentable over Tayloe in view of Smolik, and further in view of Bartle, and further in view of Elwin. Claims 6-9 depend on claim 1 and are therefore allowable for at least that reason over Tayloe, Smolik and Bartle. Elwin does not cure deficiencies in the latter and therefore claims 6-9 are further allowable over Elwin. Withdrawal of the rejection of claims 6-9 as being unpatentable over Tayloe, Smolik, Bartle and Elwin is therefore respectfully requested.

Conclusion

In view of the foregoing, favorable action on this Pre-Appeal Brief Request for Review is respectfully requested. Further, the Applicant respectfully submits that the

present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: Nov. 7, 2005

By: _____
William E. Curry
Reg. No. 43,572

KENYON & KENYON
1500 K Street, N.W., Suite 700
Washington, D.C. 20005
Tel: (202) 220-4200
Fax:(202) 220-4201